WHAT IS CLAIMED IS:

- 1. A base station modulator/demodulator for constituting
- 2 a mobile communication system and sending ATM cells to a higher
- 3 rank station and receiving ATM cells from the higher rank
- 4 station, said base station modulator/demodulator comprising:
- 5 receive means for terminating, among ATM cells received
- 6 from the higher rank station through a leased line, ATM cells
- 7 addressed to the base station;
- 8 first send means for sending, among the ATM cells
- 9 received from the higher rank station through the leased line,
- 10 ATM cells addressed to another base station to the another base
- 11 station; and
- 12 second send means for multiplexing ATM cells of a
- 13 plurality of base stations, said base station and said another
- 14 base station, and sending the multiplexed cells to the higher
- 15 rank station through the leased line.
- 1 2. The base station modulator/demodulator according to
- 2 claim 1, wherein
- the receive means identifies, from ATM cells received
- from the higher rank station through the leased line, ATM cells
- 5 addressed to said base station based on a virtual path
- 6 identifier in an ATM header preset in the base station, and
- 7 terminates the identified ATM cells, and
- 8 the first send means identifies, from ATM cells received
- 9 from the higher rank station through the leased line, ATM cells
- 10 addressed to said another base station based on a virtual path

- 11 identifier in an ATM header preset in the another base station,
- 12 and sends the identified ATM cells to the another base station.
- The base station modulator/demodulator according to
- 2 claim 1 or 2, which further comprises:
- 3 discard means for discarding, among the ATM cells
- 4 received by the receive means from the higher rank station
- 5 through the leased line, ATM cells having a virtual path
- identifier different from the set value; and
- 7 insertion means for inserting an idol cell instead of the
- 8 ATM cell discarded by the discard means.
- 1 4. The base station modulator/demodulator according to
- 2 claim 1 or 2, wherein the second send means performs band
- 3 control in such a manner that, in multiplexing ATM cells of the
- 4 plurality of base stations, the base station and the another
- 5 base station, and sending the multiplexed cells through the
- 6 leased line to the higher rank station, the number of times of
- 7 send of the ATM cell of the base station and the ATM cell of
- B the another base station is varied based on the band set value
- 9 predetermined for the leased line.
- 5. The base station modulator/demodulator according to
- 2 any one of claims 1, 2, and 4, wherein the base station has the
- 3 same processing function as the another base station.
- 1 6. An ATM cell send/receive method in a mobile
- communication system for performing send/receive of ATM cells

- 3 between a higher rank station and a base station, said method
- 4 comprising the steps of:
- terminating, among ATM cells received from the higher
- 6 rank station through a leased line, ATM cells addressed to the
- 7 base station;
- sending, among the ATM cells received from the higher
- 9 rank station through the leased line, ATM cells addressed to
- 10 another base station to the another base station; and
- multiplexing ATM cells of a plurality of base stations,
- 12 said base station and said another base station, and sending
- 13 the multiplexed cells to the higher rank station through the
- 14 leased line.